

REMARKS:

The preceding claim amendments and the following remarks are submitted as a full and complete response to the Office Action issued on January 15, 2009. Claim 1 has been amended to replace the recitation of “predetermined portions” by the phrase of “one end of each.” Support for this amendment can be found throughout the specification, for example, paragraph [0022], and in the drawings such as Figs. 1, 2 and 3. Claim 2 has been amended to recite “or” instead of “and” before the term “an array circuit” to make this claim be in proper form for Markush claim. No new matter has been added. Claims 1-15 are currently pending.

Rejections under 35 U.S.C. §102(e)

The Patent Office has rejected claims 1 and 3 under 35 U.S.C. §102(e) as being anticipated by Diner et al., U.S. Published Application No. 2004/0063915 (“Diner”). Simply citing “abstract and associated text,” the Patent Office argues that Diner teaches the invention of claims 1 and 3. (See, page 2 of the Office Action). Applicants respectfully disagree.

As recited in the amended claim 1, the claimed contact fabric comprises “semiconductor” nanorods grown on a predetermined base material and metal deposited on one end of each of the semiconductor nanorods. However, Diner fails to disclose a contact fabric using “semiconductor” nanorods. The polymers disclosed in Diner are **protein** polymers, not “semiconductor” nanorods. Unlike semiconductor nanorods, conductivity of the protein polymers disclosed in Diner cannot be controlled

by using impurities and the protein polymer cannot have n- or p-type carriers. The resistance of the protein polymers coated with metal as disclosed in Diner can only be reduced because current can flow through the metal coating. In contrast, the claimed contact fabric utilizes semiconductor characteristics by using semiconductor nanorods and depositing metal on one end of each of them. As recited in claim 1, the claimed contact fabric has a low contact resistance ohmic characteristic or a rectifying Schottky characteristic between the semiconductor nanorods and the metal depending on characteristics of interfaces between them and depending on the difference between work functions. The recited characteristics occur when carriers flow into the "semiconductor" nanorods that are not present in the protein polymers disclosed in Diner. Simply, nowhere does Diner teach or suggest using a semiconductor nanorod one end of which metal can be deposited on. Since Diner fails to teach each and every element of claim 1, it cannot anticipate claim 1. Therefore, reconsideration and withdrawal of the rejection of claim 1 and its dependent claim 3 are respectfully requested.

Rejection under 35 U.S.C. §103(a)

The Patent Office has rejected claims 2 and 4 under 35 U.S.C. §103(a) as obvious over Diner. Applicants respectfully disagree.

In rejecting claim 4, the Patent Office argues that Diner teaches the nanorod that is a semiconductor made of polymer. However, as stated in relation to the anticipation rejection, the protein polymers disclosed in Diner are not semiconductor nanorods as recited in claim 1. To establish *prima facie* obviousness of a claimed invention, all the

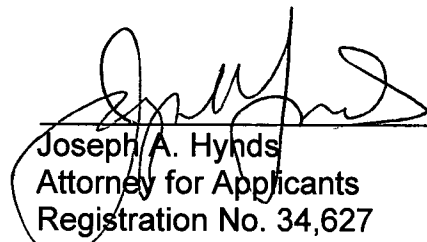
claim features must be taught or suggested by the prior art. See In re Royka, 180 USPQ 580 (CCPA 1974). Since nowhere does Diner teach or suggest using "semiconductor" nanorods on one end of which metal is deposited, there is no *prima facie* case of obviousness established, which warrants withdrawal of this obviousness rejection. Please note that claim 2 has been amended to replace "and" by "or." However, since claim 2 is dependent from claim 1, the arguments aforementioned are equally applied to claim 2 and Diner cannot render the invention of claim 2 obvious.

Considering the above, reconsideration and withdrawal of the obviousness rejections of claims 2 and 4 are respectfully requested.

In light of the foregoing, Applicants submit that all outstanding rejections have been overcome, and the instant application is in condition for allowance. Thus, Applicants respectfully request early allowance of the instant application. The Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 02-2135.

Respectfully submitted,

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